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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
HABTE, ZEWDU	

ART UNIT	PAPER NUMBER
2661	

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/887,154	EMANUEL ET AL.	
	Examiner	Art Unit	
	Zewdu Habte	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-8 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-8 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claims 3, 4 and 6 are objected to because of the following informalities:

In claim 3 line 3, "said UPD" should be changed to –said UDP–.

In claim 4 line 3, "said UPD" should be changed to –said UDP–.

In claim 6 line 22, "channel detector" should be changed to –channel type selector–.

In claims 1, 6, and 8 the word "mentioned" should be replaced with –indicated – or –identified–.

In claim 7 line 2, "a port number" should be changed to –the port number–, unless it is indicating a port number that has different functionality, which was never mentioned in the preceding claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 5, the phrase "the parameters" renders the claim indefinite because there is no reference in claim 1 to a parameter; it lacks positive antecedent basis in the claim. See MPEP § 2173.05(e).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vilander et al. (US 2004 / 0010609 A1) in view of Hagirahim (US 6449284 B1).

As to claim 1, Vilander discloses an addressing scheme to be used in an IP-based Radio Access Network (page 3, pa. 40, lines 1-3, radio access network 17), said Radio Access Network comprising a plurality of base stations (Fig. 1 @ 22, base stations) and at least one base station controller (Fig. 1 @ 24, radio network controllers), all communicating with each other by using a TCP/IP- or UDP/IP-based protocol stack (page 8, pa. 90, lines 4-19, a user plane protocol stack, Fig. 8 @ 100-8), each of said base stations being adapted to communicate with a plurality of radio terminals (Fig. 1 @ 20 , a user equipment unit) having access to said Radio Access Network over ...(page 3, pa. 40, lines 4-6, UE 20 communicates with base stations 22 over air interface 23; page 3, pa. 42, lines 1-6, ...air interface 23 on designated radio channels), said addressing scheme being characterized in that the type of radio channel over which said base station communicates with one of said radio terminals is implicitly and univocally determined by ... exchanged over said Radio Access Network and belonging to a communication with said radio terminal (page 3, pa. 40, lines 4-6, UE 20 communicates with base stations 22 over air interface 23; page 3, pa. 42, lines 1-6,

...air interface 23 on designated radio channels). Vilander does not specifically teach two different types of radio channels being determined by the port number mentioned in each TCP/UDP, but Hagirahim teaches (col. 7, lines 52-57, two logical bearer channels, one carries audio and the other is used to carry video, and assigns port number for audio and video respectively). It would have been obvious to one of ordinary skill in the art to combine Vilander with Hagirahim for the purpose of having two different types of radio channels that are determined by the port number. The motivation is to allocate the use of a particular port, and to ensure that the port number is unique for each channel outside the reserved range of well-known ports used by UDP's port addressing system to deliver information to the relevant application layer of services.

As to claim 2 Vilander teaches an addressing scheme according to claim 1, characterized in each of said ... available at a base station (Fig. 1 @ 22, base stations) or at a base station controller (Fig. 1 @ 24, radio network controllers) of said Radio Access Network (page 3, pa. 40, lines 1-3, radio access network 17). Vilander does not specifically disclose that channel types are associated with at least one of the port numbers, but Hagirahim teaches (col. 7, lines 52-61, the setup process creates two UDP processes and assigns port number address of 905 and 915, the source port number being 905 and the destination port number being 915 these port numbers used for an audio and video stream having channel IDs of 905 and 915 respectively). It would have been obvious to one of ordinary skill in the art to combine Vilander with Hagirahim for the purpose of having an associated port number for each radio channel type. The motivation is to allocate the use of a particular port, and to ensure that the port number

is unique for each channel outside the reserved range of well-known ports used by UDP's port addressing system to deliver information to the relevant application layer of services.

As to claim 3 Vilander discloses an addressing scheme according to claim 1, characterized in that said IP-based protocol stack used in said IP-based Radio Access Network (page 8, pa. 90, lines 4-19, the user plane protocol stack, Fig. 8 @ 100-8) comprises UDP/IP combination. Vilander does not specifically disclose a UDP destination port number in said UPD header determining a univocally said radio channel type, but Hagirahim teaches (col. 7, lines 52-61, the setup process creates two UDP processes and assigns port number address of 905 and 915, the source port number being 905 and the destination port number being 915; these port numbers used for an audio and video stream having channel IDs of 905 and 915 respectively). It would have been obvious to one of ordinary skill in the art to combine Vilander with Hagirahim for the purpose of having a destination port number to determine a radio channel type. The motivation is to allocate the use of a particular port, and to ensure that the port number is unique for each channel outside the reserved range of well-known ports used by UDP's port addressing system to deliver information to the relevant application layer of services.

As to claim 4 Vilander discloses an addressing scheme according to claim 1, characterized in that said IP-based protocol stack used in said IP-based Radio Access Network (page 8, pa. 90, lines 4-19, the user plane protocol stack, Fig. 8 @ 100-8) comprises a UDP/IP combination. Vilander does not specifically disclose the UDP

source port number in said UPD header determining a univocally said radio channel type, but Hagirahim teaches (col. 7, lines 52-61, the setup process creates two UDP processes and assigns port number address of 905 and 915, the source port number being 905; these port numbers are used for an audio and video stream having channel IDs of 905 and 915 respectively). It would have been obvious to one of ordinary skill in the art to combine Vilander with Hagirahim for the purpose of having a destination port number to determine a radio channel type. The motivation is to allocate the use of a particular port, and to ensure that the port number is unique for each channel outside the reserved range of well-known ports used by UDP's port addressing system to deliver information to the relevant application layer of services.

As to claim 5 Vilander discloses an addressing scheme according to claim 1, characterized in that the parameters of a communication with said radio terminal are defined by an IP address (page 5, pa. 56, lines 5-6, an IP address), a UDP destination port number (page 5, pa. 56, lines 5-6, a UDP port number which includes destination port number), and a communication identifier (page 5, pa. 56, lines 5-6, UDP uses a port number along with an IP address to identify the end point of communication) contained in the different layers of said IP-based protocol stack used in said Radio Access Network (claim 9, different layers of IP-based protocol stack, link layer protocol, the Internet Protocol, and UDP protocol).

As to claim 6 Vilander discloses a base station (Fig. 1 @ 22, base stations) to be part of an IP-based Radio Access Network (page 3, pa. 40, lines 1-3, radio access network 17) and communicating with other elements of said Radio Access Network (Fig.

1 @ 24, radio network controllers) by using an IP-based protocol stack (page 8, pa. 90, lines 4-19, a user plane protocol stack, Fig. 8 @ 100-8), said base station being adapted to communicate with a plurality of radio terminals (Fig. 1 @ 20, a user equipment unit) having access to said Radio Access Network over ..., said base station comprising a channel type selector (implicitly taught because the base station looks in the datagram for the UDP port number to identify the type of channel, which indicates the base station includes a channel type selector) to determine the channel type on which data coming from said Radio Access Network have to be transmitted to one of said radio terminals (page 6, pa. 68, lines 2-5, every user plane flow uses its own, dedicated, UDP port number; since each user uses a dedicated line, the base station knows the dedicated line's type for each end terminal), said channel detector determining univocally said channel type by means of a port number mentioned in the TCP or UDP header of a data packet received from said Radio Access Network and belonging to a communication with said radio terminal (page 5, pa. 56, lines 5-8, UDP port number is used to identify the endpoint of communication; the channel detector looks in the datagram for the UDP port number, and identifies the channel type since each end terminal uses a dedicated UDP port number and line type). Vilander does not specifically teach two different types of radio channels being determined by the port number mentioned in each TCP/UDP, but Hagirahim teaches (col. 7, lines 52-57, two logical bearer channels, one carries audio and the other is used to carry video, and assigns port number for audio and video respectively). It would have been obvious to one of ordinary skill in the art to combine Vilander with Hagirahim for the purpose of

having two different types of radio channels that are determined by the port number. The motivation is to allocate the use of a particular port, and to ensure that the port number is unique for each channel outside the reserved range of well-known ports used by UDP's port addressing system to deliver information to the relevant application layer of services.

As to claim 7 Vilander discloses the base station according to claim 6, characterized in that said channel selector further selects a port number to be used in said IP-based protocol stack to forward data to said Radio Access Network depending on the channel type on which said data are received from one of said radio terminals (implicitly taught because the base station looks in the datagram, for the UDP port number to identify the type of channel, then selects a port number accordingly to forward data to the Radio Access Network).

As to claim 8 Vilander discloses a Radio Network Controller (Fig. 1 @ 24, radio network controllers) to be part of an IP-based Radio Access Network (Fig. 1@24, a RNC part of the IP-network) and communicating with other elements of said Radio Access Network (page 3, pa. 40, lines 1-3, radio access network 17) by using an IP-based protocol stack (page 8, pa. 90, lines 4-19, a user plane protocol stack, Fig. 8 @ 100-8), said Radio Network Controller receiving from outside of the Radio Access Network data belonging to a communication with a radio terminal (Fig. 1 @ 20 , a user equipment unit), said radio terminal being accessible over ..., said Radio Network Controller comprising a channel type selector to determine (page 5, pa. 57, lines 6-8, the RNC uses a radio link controller unit 50 to identify the UDP port number; the UDP

port number indicates the endpoint of communication), according to said data belonging to said communication, the channel type on which a part of said data belonging to said communication have to be transmitted to said radio terminal (implicitly taught because an IP datagram includes the destination address if the destination address in the IP datagram indicates the radio terminal's address; the controller forwards the packet accordingly), said channel detector determining univocally, according to said channel type, a port number to be mentioned in each TCP or UDP data packet exchanged over said Radio Access Network and belonging to said communication with said radio terminal (page 5, pa. 56, lines 5-8, UDP port number is used to identify the endpoint of communication; the channel detector looks in the datagram for the UDP port number, and identifies the channel type since each end terminal uses a dedicated UDP port number and line type). Vilander does not specifically teach two different types of radio channels being determined by the port number mentioned in each TCP/UDP, but Hagirahim teaches (col. 7, lines 52-57, two logical bearer channels, one carries audio and the other is used to carry video, and assigns port number for audio and video respectively). It would have been obvious to one of ordinary skill in the art to combine Vilander with Hagirahim for the purpose of having two different types of radio channels that are determined by the port number. The motivation is to allocate the use of a particular port, and to ensure that the port number is unique for each channel outside the reserved range of well-known ports used by UDP's port addressing system to deliver information to the relevant application layer of services.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zewdu Habte whose telephone number is 571-272-3115. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on 571-272-3078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Zewdu Habte (Zed)
Examiner
Art Unit 2661

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